AMENDMENTS TO THE CLAIMS

1. (Previously presented) A DNA sequence coding for β-tubulin from Cyathostominae or fragments thereof.

2. (Currently Amended) The DNA sequence of claim 1, ~~selected from the group consisting of~~ comprising:

   ~~a)~~ a polynucleotide having at least 85% identity to a polynucleotide ~~coding for an amino acid~~ sequence as set forth in SEQ ID NO. 1 ~~2;~~

   ~~b) a polynucleotide having at least 85% identity to a polynucleotide coding for an amino acid sequence as set forth in SEQ ID NO. 4;~~

   ~~c) a polynucleotide having at least 85% identity to a polynucleotide coding for an amino acid sequence as set forth in SEQ ID NO. 6;~~

   ~~d) a polynucleotide having at least 85% identity to a polynucleotide coding for an amino acid sequence as set forth in SEQ ID NO. 8; and~~

   ~~e) a polynucleotide having at least 85% identity to a polynucleotide coding for an amino acid sequence as set forth in SEQ ID NO. 10~~.

3. (Currently Amended) The DNA sequence of claim 1, ~~selected from the group consisting of~~ comprising:

   ~~a)~~ a polynucleotide having at least 95% identity to a polynucleotide coding for an amino acid sequence as set forth in SEQ ID NO. 2;

   ~~b) a polynucleotide having at least 95% identity to a polynucleotide coding for an amino acid sequence as set forth in SEQ ID NO. 4;~~

   ~~c) a polynucleotide having at least 95% identity to a polynucleotide coding for an amino acid sequence as set forth in SEQ ID NO. 6;~~

   ~~d) a polynucleotide having at least 95% identity to a polynucleotide coding for an amino acid sequence as set forth in SEQ ID NO. 8; and~~

   ~~e) a polynucleotide having at least 95% identity to a polynucleotide coding for an amino acid sequence as set forth in SEQ ID NO. 10~~.

4. (Previously presented) The DNA sequence claims 1, comprising a sequence as set forth in SEQ ID NO. 1.

5. (Withdrawn) The DNA sequence claims 1, comprising a sequence as set forth in SEQ ID NO. 3

6. (Withdrawn) The DNA sequence claims 1, comprising a sequence as set forth in SEQ ID NO. 5.

7. (Withdrawn) The DNA sequence claims 1, comprising a sequence as set forth in SEQ ID NO. 7.

8. (Withdrawn) The DNA sequence claims 1, comprising a sequence as set forth in SEQ ID NO. 9.

9. (Withdrawn) The DNA sequence of claims 1, comprising a sequence as set forth in SEQ ID NO. 11.

10. (Previously presented) The DNA sequence claims 1 wherein said DNA sequence originates from Cylicocyclus.

11. (Previously presented) The DNA sequence claims 1, wherein said DNA sequence originates from Cyathostomum.

12. (Previously presented) The DNA sequence as claimed in one of claims 1, wherein said DNA sequence originates from Cylicocyclus nassatus.

13. (Previously presented) The DNA sequence of claims 1, wherein said DNA sequence originates from Cyathostomum coronatum.

14. (Previously presented) The DNA sequence of claims 1, wherein said DNA sequence comprises at least one base replacement in codon 200, which causes said DNA sequence to express a polypeptide having anthelmintic resistance.

15. (Previously presented) A DNA sequence comprising a sequence, complementary to the DNA sequence of claims 1 to 14 or fragments thereof.

16. (Previously presented) An RNA sequence comprising a sequence, complementary to the DNA sequence of claims 1.

17. (Currently Amended) An expression construct, comprising the DNA sequence of claims 1 to 14 operably linked to an expression system ~~and a sequence linked functionally therewith, which makes possible the expression of the DNA~~.

18. (Previously presented) A vector, comprising the DNA sequence claims 1.

19. (Previously presented) A host cell, comprising a DNA sequence selected from the group consisting of the DNA sequence of claims 1 to 14, an expression construct therefor and a vectors thereof.

20. (Withdrawn) A polypeptide encoded by a the DNA sequence of claims 1 to 14 or fragments thereof.

21. (Withdrawn) The polypeptide of claim 20, comprising an amino acid sequence as set forth in SEQ ID NO. 2.

22. (Withdrawn) The polypeptide of claim 20, comprising an amino acid sequence as set forth in SEQ ID NO. 4.

23. (Withdrawn) The polypeptide of claim 20, comprising an amino acid sequence as set forth in SEQ ID NO. 6.

24. (Withdrawn) The polypeptide of claim 20, comprising an amino acid sequence as set forth in SEQ ID NO. 8.

25. (Withdrawn) The polypeptide as of claim 20, comprising an amino acid sequence as set forth in SEQ ID NO. 10.

26. (Withdrawn) A polypeptide encoded by a the DNA sequence of claim 14.

27. (Withdrawn) A process for the preparation of a polypeptide, comprising the step of expressing the polypeptide or fragments thereof in a prokaryotic or eukaryotic expression system.

28. (Currently amended) A DNA oligonucleotide[[s]] that hybridizes specifically to the DNA sequence of claims 1 to 15, wherein said DNA sequence ~~originates~~ is from Cyathostominae.

29. (Cancelled)

30. (Withdrawn) A procedure for the detection of Cyathostominae, comprising the steps of hybridizing the DNA oligonucleotide of in claim 28 to a DNA sequence and amplifying by means of PCR.

31. (Withdrawn) A procedure for the detection of Cyathostominae having anthelmintic resistance, comprising the steps of hybridizing the DNA oligonucleotide of claim 29 is to a DNA sequence from a Cyathostominae sample and amplifying by means of PCR.

32. (Previously presented) A DNA oligonucleotide comprising at least one of the sequences as set forth in SEQ ID NO. 12 to SEQ ID NO. 51 or a sequence derived from one of the DNA sequences as claimed in of claims 1 to 15.

33. (Currently amended) A diagnostic test kit comprising the oligonucleotides of claim 28 ~~32~~.

34. (Previously presented) The diagnostic test kit of claim 33, wherein said DNA oligonucleotides further comprises a detectable label.

35. (Withdrawn) An antibody, that it reacts specifically with an epitope of a the polypeptide as of claims 20.

36. (Withdrawn) The antibody of claim 35, characterized in that it is monoclonal.

37. (Withdrawn) A nematicide comprising the antibody of claim 35.

38. (Withdrawn) A vaccine comprising the polypeptide of claims 20.

39. (Cancelled)

40. (Withdrawn) A procedure for the identification of substances which modulate the interaction of tubulin, comprising the steps of

a) bringing the test substance into contact with tubulin under those conditions which allow interaction of the tubulin molecules with one another and binding of the test substance to tubulin,

b) detecting the binding of the test substance which has taken place by determining the ability of the tubulin protein molecules to interact with one another, and

c) comparing the ability of the tubulin protein molecules to interact with one another in the presence of a test substance with their ability to interact with one another in the absence of a test substance.

41. (Withdrawn) The procedure of claim 40, wherein the tubulin is a polypeptide as claimed in one-of claims 20 to 26.

42. (Withdrawn) The procedure of claims 40, wherein a test system based on cells detects a modulation of the tubulin interaction in the presence of a test substaqnce.

43. (Withdrawn) The procedure as claimed in one of claims 39 to 41, characterized in that, for the detection of a modulation of the tubulin interaction in the presence of a test substance, a cell-free test system is used.

44. (Withdrawn) A substance that is identified by the procedure of claim 40.

45. (Withdrawn) An agent for the prophylactic or therapeutic treatment of a nemotode attack comprising the substance of claim 44.

46. (Withdrawn) A diagnostic test kit comprising the antibodies of claim 35.